

## Product Data Sheet

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**Cat#:** AD-112-U  
**Cat#:** AD-112-B, Biotin labeled  
**Cat#:** AD-112-F, FITC labeled

**Product Description:** Crude Extracellular Mixture of E. coli

**Aptamer Type:** DNA

**Sequence:** 5'-  
CACGGATCCTGACAAGGATGTGTGCGTTGTCGAGACCTGCGACCGGAACACTACACTGTGTGGGATGGATTTCTTTACA  
GTTGTGTGCAGCTCCGTCGACTCTTCCTAGC-{Internal/Fluorescein-T}A-{Internal/dabcyl-T}-GGTTCGATCAAGA-3'; 125-  
mer

**Size** 100 nM

**Mol. Wt:** 38623.03 g/mole

**Purity:** >95%

**Affinity:** n/a

**Comments:** In the presence of E. coli CEM, aptamer adopts an active conformation and cleaves the adenosine ribonucleotide residue, separating fluorescein from the dabcyl quencher. nnn in structure represents (fluorescein-dT)-adenosine ribonucleotide - (dabcyl-dT).

**Notes:** To overcome the reduced detection times by PCR and antibodies based methods for pathogen detection, catalytic DNA molecules (DNAzymes) were developed. Fluorogenic DNAzymes based on RFD DNAzyme system was isolated from a DNA library to fluoresce in the crude extracellular mixture (CEM) that is produced by a specific bacterial pathogen E.coli.

**References:** Ali et al. "Fluorogenic DNAzyme Probes as Bacterial Indicators." *Angewandte Chemie International Edition*, 50 (2011): 3751-3754.

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